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IMPACT OF THE ACADEMIC LIBRARY ON THE EDUCATIONAL PROGRAM.
NEW DIMENSIONS IN HIGHER EDUCATION, NUMBER 29.

BY- JORDAN, ROBERT T. AND OTHERS

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AN ATTEMPT TO DEFINE THE PROPER ROLE OF THE COLLEGE LIBRARY IN THE ACADEMIC FRAMEWORK WAS MADE ON THE BASIS OF A REVIEW OF THE LITERATURE ON COLLEGE LIBRARIES AND OF REPORTS ON LIBRARY EXPERIMENTS. THIS REPORT ALSO REVIEWED THE CONCEPTS UPON WHICH THE EXPERIMENTS WERE BASED. THE AUTHOR STATED THAT THE ROLE OF LIBRARIES AND EDUCATORS MUST CHANGE IN RESPONSE TO THE NEED TO FIND WAYS TO (1) GIVE ALL STUDENTS A GENERALIST, HUMANITARIAN ORIENTATION AS A FOUNDATION FOR SPECIALIZED VOCATIONAL TRAINING, (2) ENSURE THE PROPER USE OF LEISURE TIME, (3) FIND WAYS TO ASSIST PEOPLE TO COME TO TERMS WITH THEMSELVES, AND (4) TO HELP IN THE RETENTION OF INDIVIDUALITY. INTERDISCIPLINARY CURRICULUM DEVELOPMENT WAS SEEN AS CAUSING SEPARATE DISCIPLINES TO VANISH AND AS CAUSING A SHIFT FROM LECTURE TEACHING TO INDIVIDUAL STUDY WHICH, IN TURN, HAS INDUCED A SEQUENCE OF CHANGE IN THE ROLES OF BOTH TEACHERS AND LIBRARIES. THE AUTHOR REPORTED EXPERIMENTS THAT WOULD MAKE LIBRARIES THE CENTER OF THE COLLEGE, CAUSE THE LIBRARIES TO ASSUME THE ROLES OF BOTH LIBRARIAN AND PROFESSORS, AND SEND THE TEACHERS BACK FROM RESEARCH TO INDIVIDUALIZED TEACHING. CHANGES IN THE NATURE OF LIBRARY SERVICE THAT WERE BEING CAUSED BY EDUCATIONAL DEVELOPMENTS WERE DISCUSSED. AN ANNOTATED BIBLIOGRAPHY WAS INCLUDED IN THE REPORT. (AL)

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NEW DIMENSIONS
IN HIGHER EDUCATION

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IMPACT OF THE ACADEMIC LIBRARY
ON THE EDUCATIONAL PROGRAM

by Robert T. Jordan
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Dr. Louis Shores received his bachelor of arts degree from the University of Toledo in 1926, his masters degree from the college of the City of New York in 1927, and his Ph.D. from George Peabody College in 1936. After holding the directorship of the Library School at Peabody College for more than a decade, he accepted his present position as director of the Library School at Florida State University in 1946. He was the recipient of a Senior Fulbright Award in 1951.

In addition to serving as editor-in-chief of Collier's Encyclopedia since 1960 and as editor of the Journal of Library History since 1965, Dr. Shores has also published widely in the broad area of library science.

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FOREWORD

(If and when this manuscript is published for general distribution, the Editor will gladly prepare an appropriate Foreword for the wider audience.)

HIGHLIGHTS

Much has been written on the place of the library on the college campus, but little has been said concerning the impact of the academic library on the entire educational program. The present study, which includes an extensive annotated bibliography, attempts to define the proper role of the library in the academic framework and discusses the various library experiments that are being introduced throughout the United States. Among the topics explored are the concepts upon which these experiments are based.

1. The new developments involve greater interdepartmental cooperation within the curriculum, a greater emphasis on the library as an essential entity in the educational process, and the alteration of the traditional course concept. The faculty is also being encouraged to become involved in these institutional changes, and there is increasing emphasis on library guidance and counseling.
2. Methods of teaching and learning are germane to the changing role of the library on today's campus. Independent study, honors programs, the tutorial method of learning-teaching, and the changeover from lecture techniques to library study, all tend to give greater importance to the library. Likewise, the new ideas of organization and administration of higher education are vital to the topic. The trends toward autonomy and cooperation in colleges, architectural and planning innovations, "cluster" colleges, library-colleges, and caravan library-college concepts and experiments are all involved in the relationship of the library to the academic program.
3. Today's librarian must reappraise his role and the functions of the library. He must assess the impact of technological innovations, the need for cooperation, interdependence, and staff training, and the relation of the library to students, faculty, and administration.
4. The 151-item annotated bibliography cites most of the important research that has been done so far and points to avenues of further investigation.

I. INTRODUCTION

Broadly speaking, library systems are intended to facilitate and promote the acquisition and organization of knowledge. In organizing as well as in acquiring knowledge, it is desirable to consider the whole campus at one time.

Many of our early educators thought all that was necessary to educate someone was to recognize the truth about something and then teach it. Yet most schools of philosophy deny that man has any claim to absolute knowledge. Progressive education drew upon William James' suggestion that we be prepared to revise our beliefs. Existential epistemology, if followed by our teachers, may radically change the philosophy of education. We may find "teachers" augmented by "senior students," "each one teaching one," after the Lancastrian-Bell model or the contemporary Lanbach mode. These "senior students" have valuable resources to offer. We may find the predatory disciplines vanishing before the interdisciplinary desires of frustrated curriculum makers.

As we look at the scene today we recognize many factors and forces

which will condition the future of higher education and the impact of libraries on higher education. Of these factors and forces, several seem to be worthy of specific comment. First, there seems to be no alternative, no future, for those people without a school or college diploma. The ultimate goal of education should then be to explore other ways of educating and to find the means for implementing these other ways. There has been a shift in the kinds of goods and services we want, and coupled with this shift is the growth in educational, medical, economic, and social needs. All these new services demand expansion of the professional ranks.

A second factor in the changing scene has been the heavy concentration of population in urban areas. This concentration means that new devices must be found to meet the needs of these urban dwellers. The protection of their well-being and integrity must become one of our major educational goals.

A third factor is the tremendous population explosion, which poses the problem of how to provide adequate educational facilities, teachers, salaries, and other necessary conditions for meaningful education of the masses.

And a fourth factor is the proximity of all countries of the world. New methods of travel and communication have made all countries next-

door neighbors, which requires a sharing and exchange of customs and standards between different nations and peoples. No one country, including the United States, should arbitrarily seek to impose its standards on others.

From these four factors arise a number of implications for college learning and the role that libraries can play as material and instructional centers. The libraries and educators must find ways to ensure that all individuals have a basic generalist and humanitarian orientation as a foundation for any specialized vocational training; to ensure the proper use of leisure time; to find ways so that people can come to terms with themselves; and to help in the retention of individuality in a mass culture.

All of the radical conceptual shifts in the sciences and the humanities are rendering obsolete the old "pyramidal forms" of education and the library. Knowledge has now become a complex interplay of levels of knowing and levels of reality. Somehow the library and the teacher must master this interplay and seek an approach to a contrapuntal accord between different modes of knowing on differing levels of reality. This concept emphasizes that knowledge is a continuous process which uses the tools of culture and language and that directly involves the individual with the many realities of the world.

Of necessity, the library will have to strive for a balance between the teacher's interests, the student's interest, and the demands of the subjects under consideration. Libraries will have to be planned and developed as the central and functioning symbol of the college's emphasis on independent and integrative study. The library must redefine its system of holdings and must include as integral to the library complex those study instruments and materials (in addition to books and periodicals) which are characteristic of all of the various fields of inquiry. Ideally the library should be so organized that it plays a central role in the inquiries of both students and faculty members; it should not only be a place for books, but also for those materials essential to the looking, making, and doing that are appropriate to each field of study.

In the second half of the twentieth century, higher education in the United States has entered upon a new and difficult phase. With automation and the trend toward democratization of higher education problems have arisen for both large and small, and public and privately supported institutions of higher learning. Large publicly-supported institutions can usually coordinate the various facets of growth and make the necessary transition fairly smoothly; but for economic or sentimental reasons, small privately supported institutions are often unable or unwilling to make the necessary transition. Yet if the

smaller, private schools remain static, the larger institutions will monopolize students, funds, and research opportunities while the smaller institutions will fade into oblivion.

Traditionally, the library on a college campus has been passive: it has kept in its place. The library must no longer remain only a storehouse, manned by "academic handymen." Libraries will have to be integrated into the instructional process in such a way as to maximize their usefulness. The professional skills and knowledge of librarians must be used in the total education process.

What happens to academic libraries depends upon what happens in higher education, in communications, and in training for librarianship. These areas will in turn be influenced by what happens in population growth, urbanization, international affairs, the economic situation, and in intercultural and interracial relations.

D. H. Burnham, architect and planner of cities, formulated a motto which might serve us today:

Make no little plans; they have no magic to stir men's blood and probably themselves will not be realized. Make big plans; aim high in hope and work, remembering that noble, logical diagram once recorded will never die, but long after we are gone will be a living thing, asserting itself with ever-growing consistency. Remember that our sons and grandsons are going to do things that would stagger us. Let your watchword be order and your beacon beauty.

II. NEW LIBRARY-RELATED IDEAS IN COLLEGE PLANNING

Background

The contemporary American university--or multiuniversity, as Clark Kerr terms the larger modern universities--is an amalgam of the colonial college with its British heritage and of the German university, whose influence was crystallized with the founding of Johns Hopkins in 1876, shaped and modified by the land-grant philosophy of service to society and democratization of educational opportunity.¹

It is this concept of the university, along with such related institutions as the junior college and the four-year liberal arts college, that will be under consideration in the following pages. At the heart of this institution is the undergraduate college of arts and sciences, and the library. It is here that the most revolutionary changes are needed and it is here that they are occurring. The early 1950's fostered complacency and bureaucracy in higher education, while the 1960's are advocating experimentation and departure from tradition.

Increased enrollments, affecting both the undergraduate and graduate schools, have contributed to: (1) an increased emphasis on continuing education; (2) an increased emphasis on general-education

requirements in professional programs; (3) stress on basic concepts rather than professional courses; and (4) professional programs shifted to the graduate level, e.g., business, education, and journalism.

These forces or tendencies may, in part, be offset by such factors as the public two-year colleges, the military draft, the popularity of the junior-year-abroad program, and early marriage. Even so, the universities must effectively teach the students who transfer and return from abroad as well as the foreign students and the inevitable mass of new students.

At a time when a strong faculty is needed most, the trend has been toward lighter teaching loads, a lower proportion of college teachers with Ph.D. degrees, and an increasing emphasis on pure research. Counteracting this trend is the technological revolution in education. Use of television, programmed-learning, and independent study may render obsolete the traditional lecture method of teaching and modify the image and purpose of the "professor." The behavioral sciences are beginning to provide some answers to questions in the areas of learning and independent study. Psychology and its emphasis on the differences, needs, and objectives of the individual in relation to learning can lend direction to experiments in education on the college level.

Another force at work within the university is the dichotomy between "two cultures": science and the humanities and social sciences. In colleges of arts and sciences there is a trend toward modification of the curriculum, resulting in interdisciplinary and area studies, and increased emphasis on contemporary problems.

New knowledge, based on the old, finds its way into the curriculum, supplanting obsolete information and adding its weight to the influx from all disciplines. One of the serious problems for students is when and whether to specialize. Many people now believe that it is the responsibility of the undergraduate college to provide a broad background of generalization and integration, and to serve as preparatory schools for graduate or professional training. This approach would reverse a previous tendency to develop lower-level copies of graduate schools.

Another trend is the "holding-power" of schools, or the length of time it takes a student to obtain an undergraduate education. It appears that many educators would hope to lengthen the undergraduate years to five.

New teaching methods, particularly independent study, are increasing the use of the library. Practically all of the new trends in curriculum involve increased emphasis on library resources, and there

is thus increasing pressure to speed up the processes of communication.

Curriculum

Stephens College in Columbia, Missouri, has published a statement on the philosophy of education. Inherent in this statement are many of the new ideas on curriculum which have been planned or are being implemented in colleges and libraries today.

Education is not an abstraction. It is an accumulation of experiences gained from living and being interested in life.... Much is accomplished in the way of broadening the intellectual horizon of the student through personal relations.... In informal contacts with faculty and other students, the play of mind against mind occurs. The college recognizes individual variation in students and provides for individual freedom of choice in ways of developing towards broad basic goals.... There is generally an informal atmosphere.... Many faculty members establish semitutorial relations with students, while in other courses individualization is achieved by ability grouping, project work, conferences. Basic to the effective functioning of the college is the continuous program of education experimentation and research.²

It is clear that Stephens College assumes that learning can be exhilarating and pleasant, and therefore the school emphasizes the importance of the individual student. The implications of this approach for the library are two-fold: (1) The library should reflect the philosophy of education of the institution in its structure and planning. (2) The demarcation line between the librarian as a "keeper of books"

and the professor should be modified; rather, the library should gradually assume the functions of both.

Many educators maintain that the curriculum should be based on the structure of the discipline, and that the organization of the library should reflect that structure. It has been suggested that an experimental library should test the merit of this notion. The basis for such an attempt would be the idea that the curriculum contains those studies and fosters those experiences which are significant in the individual lives of the students and which are at the same time relevant to the needs of society in which the students will live. Traditionalists might be surprised to note that, in large part, this implicates the library with the ongoing process of the life of the student. This unorthodox conception of the library would necessitate the support of an experimental college. Such a college would, hopefully, bring about such concomitant outcomes as: (1) attracting and effectively teaching able persons who are not now gaining a college education; (2) establishing an imaginative curriculum better adapted to the conditions of modern life; and (3) greatly increasing the effectiveness of learning.

It is anticipated that the net result would be such excitement, intensity, and vitality that college teachers would return their major attention to teaching instead of research. The students, through innovations such as independent study, programmed instruction, and television

and language laboratories, could be better motivated to learn since these devices might supply the incentive that is now lacking in many. The return of the professor to serious teaching, then, is a crucial matter deserving attention by the "experimentalists."

Faculty

An in-service program for faculty improvement of undergraduate instruction might be developed with the following aims in mind: (1) to develop an awareness of how individuals learn; (2) to develop concern in working with individual students and groups; (3) to improve the emotional climate in the classroom for purposes of learning; (4) to improve the effectiveness of teaching through constant absorption of new knowledge; (5) to improve teacher effectiveness by increasing a teacher's emotional maturity through personal counseling; (6) to improve the faculty's understanding, use, and acquaintance with the central resource center (library); and (7) to study individual differences in media format, level, and content as intently as individual differences in student physiology, culture, and emotions with a view to tailoring instruction to meet individual needs.

Some 150 years ago, Joseph Lancaster offered the "Each One Teach One" idea which is being revived today in the search for ways of attracting faculty back to the students. Under Lancaster's system,

students as they advance in their work become (under faculty direction) instructors, tutors, or monitors of those students who are not as highly advanced. This method is a natural complement for the library-learning trend, benefiting both student and tutor.

Independent Study

A study at Goddard College in Plainfield, Vermont, revealed that the independent method of learning often demands more of the professor; yet it also puts him into an enviable position of being allowed to teach on a personal basis and thus gaining additional insight into the processes of learning.

Independent study requires the student to describe his objectives, the problems he plans to investigate, the background necessary to begin the study, and his plans for reporting progress. The student, again, does the evaluation of his study by describing changes in objectives; giving a chronological account of the major problems or ideas with which his study has dealt; listing the books, tapes, films, field trips, and other resources which have aided him; and describing the achievement in his own terms. It is the student's responsibility to initiate, plan, carry out, and evaluate his own work.

Independent study coupled with the honors program is a widespread and increasingly successful method of learning. An operational

definition of this method might be,

The pursuit of special topics or projects by individual students under the guidance of faculty advisers apart from organized courses.... It differs from the credit-for-nonsupervised-reading type of work in that the faculty member keeps in close touch with the work of the student, serving both as counselor and guide. It differs from tutoring in that the student has more freedom of choice as to the area and nature of his work.³

The freedom permitted the student to carry on independently is not an end in itself, but a means to encourage more and better work than under a more conventional and restrictive system. As a result of a study by Dell Felder of the colleges who practice independent study, the following suggestions have been made. Independent study must be supervised: (1) by conferences between students and advisers; (2) by periodic written reports of progress; (3) by small-group meetings or seminars; and (4) by interim tests, written or oral.

Along with individualized study, there are trends and developments involving newer materials of instruction and the hardware used with the newer media. In relation to the curriculum, these materials and devices together provide greater service to larger numbers, conserve teacher time, enrich the learning process, facilitate independent study, and yield better understanding of the dynamics of learning. It is difficult to prove that one method of instruction is better than another; research has resulted in conclusions as varied as the students themselves. One of the chief

opportunities of the experimental library (the proposed storehouse of the new media) is to demonstrate what the media can or cannot do compared to traditional media.

To successfully implement the ideas described thus far, it is necessary to make organizational and administrative changes in institutions of higher learning. These changes must be ideological as well as physical. The library, often termed the "heart" of the campus, will inevitably be involved in any reorganization of the college.

Organization and Administration

The concept of the library as a separate and distinct entity is gradually dying. The library's functional mutability is manifested in the various names or definitions applied to it in recent years; these include library-centered college, library arts college, library-college, and college host center with a library-college. Essentially, from the most conservative to the most experimental of these names, the idea behind them is to combine or coordinate the library and college to the mutual benefit of both.

The aim of the library-centered college is to involve all its members in a program directed toward the intellectual development of the individual through the thoughtful reading of books in all forms, and through the use of other media such as classroom discussion, occasional lectures,

examinations, written reports and essays, and computers. More specifically, the library-centered college will be both head and heart of the college--and the faculty will be a library-faculty. The emphasis will be on undergraduate learning rather than on intensive postgraduate research. Thoughtful use of materials will be stressed rather than copious notetaking.

Louis Shores, in his article "The Library Arts College," refers to the 31st yearbook of the National Society for the Study of Education which lists 128 reforms which differ only in the degree of instructional responsibility placed on the library. College reformers acknowledge the generic term "book" as the current material unit of cultural education. The library-college, enlarged as a concept from the singular importance of the library and the book-centered campus, is a logical development of the idea that the library is the core of the campus. The library-college, with the faculty and library losing their separate identities but merging into one integrated team, helps to insure the maximum development of the individual student.

"The 'College Host Center' is a proposal for a new type of institution that would provide the physical plant for a group of small autonomous colleges. The 'Library-College' would be one of these small autonomous colleges, based on complete integration of the library and the faculty."⁴

An example of this type of college within a college is Monteith, at Wayne State University in Detroit. Such a plan has been in existence at Oxford for many centuries where it is recognized that liberal education is facilitated when conducted in small groups of students and faculty.

The College Host Center would provide the building--a centralized research library--and other large-scale services to a group of 20 to 40 small, autonomous liberal arts colleges, each of which would be entirely independent and free to experiment with its curriculum and academic program. Each college would be self-sufficient financially, administratively, and ideologically. One advantage of the College Host Center concept is the fact that it would provide a practical base for controlled experiments in educational effectiveness. Another term for such a center is "cluster-college." That it would be able to support certain functions and facilities that service all of the satellite colleges is evident.

The library-college would be characterized by an absence of any physical or educational demarcation between the library staff and the faculty; or between the discussion and seminar rooms and the library facilities. The key and typical activity in the library-college would be independent study. The central resource center (library), closely surrounded by faculty offices, individual carrels, and small group discussion

rooms, would be the physical focus of educational activity rather than the classroom. As learning occurs only within the student, he would be required to assume the primary responsibility for learning. Each student would progress at his own pace, as an individual or as a member of a small group, in contrast to the traditional classroom technique of lecture-discussion.

To assist in the development of one unified faculty, all librarians would also teach, and all faculty members would also share some responsibility in connection with the resource center. All librarians would be specialized "faculty-librarians" who would have an equal amount of subject training as other faculty members, in addition to special training in librarianship. The library would be planned in every respect as an integral and active part of the instructional process (not as a passive storehouse). In addition, the library would serve as the main social-cultural-intellectual-discussion center on the campus and would absorb many of the functions of the study halls and the student union.

In a time plagued by conflict and loss of personal identity and community, this proposal (college host center and library-college) might restore to the years of higher education the satisfaction of face-to-face relationships of a small, tightly knit, purposeful group. At the same time, there could be unlimited access to all of the facilities and advantages of a large complex institution. The entire system would be deliberately

organized in such a way as to encourage response to the changing requirements of a dynamic world, and to avoid the continuation of institutional mediocrity or stagnation.

In the charter for the "Library-College" adopted by the Workshop on the "Library-College," Jamestown College, Jamestown, North Dakota, the following purpose is stated:

The purpose of the Library College is to increase the effectiveness of student learning, particularly through (though not limited to) the use of the library-centered, independent study with bibliographically expert faculty. This charter assumes that the "library college concept" can and should be adapted to colleges with varying objectives and philosophies. The curriculum of a particular library college must emerge from its objectives and philosophy.⁵

If Jamestown College is to satisfy its objectives, it will require library materials of various types, independent study with faculty assistance, a faculty schooled in the use of all library materials in their respective fields, and students who can achieve competence in reading, writing, speaking, listening, and using the above materials to attain the end result--knowledge.

Another organizational innovation suggested is that of combining the library and the dormitory. The idea of individual carrels for every student, which has been effected at Oklahoma Christian College in Oklahoma City, Oklahoma, is also in tune with the trend toward

individual study. Thereby, each student has two sets of study facilities, one in his dormitory and one at the library. Another way to approach the same need is to combine dormitory and library, where the idea would work best in colleges with small enrollments. Given these conditions it would be possible to build a circular building which would enclose the library-faculty, office-seminar areas, and student living quarters.

The caravan library-college is yet another variation of the library-college concept. Its purpose is to provide a program of "education in action" by using both intellectual resources and community services in a permanent but mobile physical plant staffed by project-coordinator-librarians. The caravan library-college would be a semiautonomous unit attached to a permanent campus. One of its forms would be a fleet of self-contained trailers, each adapted to concentration on one project, problem, or area with a compact group of staff and students. The general approach would be interdisciplinary, and the group would study the various aspects of life in a given geographic area. It has been suggested that such a unit would combine teaching and practice in new and meaningful ways.

The best working example of the caravan library-college program is the University of the Seven Seas in Orange, California. The availability

of on-location resources, such as museums, newspapers, computer centers, and government offices, add to the measure of success of the program. Because of its emphasis on the search-and-inquiry method, the library-college concept is peculiarly adaptable to mobility. The college and its library go with the student into the field and offer a home base for continual reinforcement and education.

III. INFLUENCE OF NEW DEVELOPMENTS ON THE NATURE OF LIBRARY SERVICE

New Functions of the Library

"Any plan for library service must be adapted to the needs of both print and scholarship. All plans for library service are, therefore, compromises."⁶ The nature of library service will be affected by the changes that new ideas and experiments have brought about in collegiate organization and administration. First and foremost, the library must accommodate the materials and the users, whether such accommodation be in a conventional or an experimental sense. Library organization depends upon the following factors: (1) the size of collection; (2) the amount of research being conducted; (3) the funds available; (4) the location of instructional facilities in relation to the library building; (5) the strength and autonomy of individual departments and the extent of interdepartmental cooperation; (6) the degree of reading and the sophistication of reading habits of the student body; and (7) the facilitation and encouragement of research.

Also, a university or college library is often organized according

to six criteria: (1) function (acquisitions, circulation); (2) activity or process (order, repair); (3) clientele; (4) geography; (5) subject; and (6) form of materials (periodicals, microfilm, etc.). In the past, emphasis has been placed on organization by function; however, the trend is to reorganize materials around the subject matter of the collection.

The successful conduct of independent study depends greatly on the availability of library resources. Patricia B. Knapp, in "Independent Study and the Academic Library," discusses independent study and its two-fold implications for the library: (1) the library must provide the obvious facilities; and (2) the library must play a dual role regarding both "acquiry" (of materials) and "inquiry" (of students, faculty).

To date, librarians have served to acquire predetermined materials for the users of college libraries. But, with the instigation of independent study, the librarian can play a much more vital role in "inquiry." It is a clear conclusion that traditional programs simply do not develop the necessary sophisticated understanding of the library that must complement the increasing emphasis on independent study.

As stated earlier, the new developments in education have supported a trend toward the separate undergraduate library, the purpose of which is to provide: (1) support for undergraduate courses; and (2) opportunities for enrichment, discovery, and entertainment.

Viewed in the perspective of American college history the current Undergraduate Library trend is but another milestone along the road to educational revolution.... The Undergraduate Library is another evidence that the reading room and classroom are exchanging places.... College education has been inexorably leading to a reversal of the present regimen which calls for regularly scheduled lectures followed by irregular periods of library reading.⁷

Further, it has been said that the librarian-teacher, as a faculty member, is in the best position to provide a liberal education since he is committed to no subject, but rather to the entire range of knowledge accumulated by man. For those who believe that education is an individual matter, the library encourages introspection and thought.

Architecture and building plans, products of the new thinking in higher education, will influence the nature of library service. If the college library is to realize its educational function, the physical plant must reflect that realization. Browsing, smoking, typing, and conference rooms continue to be a formalism not compatible with the new ideas about college libraries. Flexibility should be built-in, with the educational function in mind. It is also necessary to recognize the difference in the tasks of the technically trained librarian and the teacher-scholar librarian, and a balance between them should be attained. Adequate facilities for both should be provided in the library building.

Impact of Technological Innovations

The library or resource center will contain, along with books, the newer media. The fundamental issue concerning the new forms of the generic "book"--tapes, records, graphics, magnetic tapes--involves not the media themselves, which are carriers, but the transformation of their products (symbols, sign, signals) into knowledge. The new media will be used only when printed materials will not do as well. More important, the new media transfigure the traditional image of the professor as a dispenser of knowledge. He now helps the student in learning to learn by motivating him and encouraging him. His responsibility is now to the student, not to the innocuous lecture.

While forecasting changes to occur in libraries as a result of growth, research, teaching developments, and technological innovations, it should be mentioned that both microphotography and automation, as used for circulation and serial-receipt records as well as for memory banks which can be printed out on demand, are having a great effect on the profession of librarianship.

It should be noted that, while the present state of the computer art would permit the mechanizing of many aspects of bibliographical control and operation in libraries, it will require technological developments of the future to enable librarians effectively to store mechanically large quantities of the **CONTENT** of their holdings for future retrieval.⁸

With the new emphasis on "team research," such as that which is now occurring at the Johns Hopkins School of Advanced Study in Washington, D.C., there is an ever increasing amount of interdisciplinary exchange; thus, the resources for specific subject fields must be bibliographically available to all. Team research will also affect traditional policies regarding amounts and kinds of professional literature to be maintained. Libraries must resolve the conflict between the simultaneous need for more extensive coverage by country, language, and interdisciplinary field, and the need for more intensive coverage in traditional subjects.

It is our belief that the key to the problem is the library staff. The librarian-scholar who is accepted by the academic community is essential to the careful coordination of book selection policies and practices for collections throughout several universities, not merely for his own library.

IV. SUMMARY

Universities continue to be faced with the challenge of the undergraduate student, especially during his freshman and sophomore years. The growth in student enrollment, notably at the graduate level, has led to the idea of completely eliminating the first two years from the university program. The junior and community colleges are assuming an increasing amount of the burden and may eventually solve this part of the problem. Another way of meeting partially the needs of undergraduate students is to provide separate facilities, such as an undergraduate library. Many universities are also offering interdisciplinary and regional study programs as well as providing honors programs with emphasis on independent study. At the same time, the university continues to be faced with the problems of providing for the needs of graduate students and faculty members, both of whom require more services and facilities than the undergraduates. Research is an important activity on most university campuses, and it too must be coordinated with the teaching function.

The broadening college curriculum and the consequences of

continuing proliferation in specialized fields of knowledge have caused university libraries to organize their materials in accord with curriculum developments. Students, researchers, and members of the teaching faculty no longer draw materials only from their special fields but demand information cutting across various subject areas; therefore, interdisciplinary cooperation in the acquisition, storage, and cataloging of materials, as well as in the handling of interlibrary loans, must be further implemented. Mechanization of library processes and the increased use of microforms have aided libraries in providing improved services to their patrons and to other libraries. The anticipated increase in work load in academic libraries will bring additional pressure upon the librarian to delegate tasks that can be accomplished for the individual library on a centralized basis. The use of a centralized processing center appears to have particular appeal for junior college libraries because they have smaller and less varied collections than those of other types of academic libraries.

The change in the methods of teaching has also affected libraries and has led to their becoming an even more important element in the educational process. Textbook teaching has provided the student with little incentive to use the library. Assigned reading lists led to greater use of the library and caused extensive duplication of materials in some areas. The trend toward independent study finally has allowed

the library to become the university's center for learning. It is therefore important that students be taught how to use the library so that it will be of utmost benefit to them. The best method of such instruction has yet to be found, but studies are being undertaken in several institutions. A number of universities are also providing better service to undergraduate students by separating the undergraduate library from the research library. In the past a general reading room was felt to be sufficient, but with the trend toward independent study, individual carrels and seminar rooms will have to be provided for the undergraduates as well as for the graduate students and faculty.

With the development of area study programs, many new courses are being instituted with little or no consultation with the librarian. Acquisition of materials, which are often ephemeral, about emerging nations is more difficult than the procurement of current books. However, the acquisition of current materials as well as back files is of utmost concern to librarians. For these reasons, it is necessary that the librarian be active in coordinating the management of the library with the development of the curriculum on a continuing basis.

It is evident that librarians must constantly strive to organize their libraries to meet the needs of their institutions. While cooperation is helpful in many of the processes, it is not effective unless

the cooperating libraries are efficiently operated. Each librarian should look objectively at the role his library plays in the educational programs of his institution. He may begin by trying to answer this question: "Is the library adequate to meet the educational needs of the students, not can the students use the library facilities?"

In the foregoing pages, we have endeavored to describe those areas in which further research is necessary. In brief, they are the following: (1) the importance of independent study; (2) the uses of a centralized processing center for a cluster of junior colleges; (3) teaching responsibilities of academic librarians; (4) the most efficient use of library resources; (5) the academic library and its role in determining the curricula; (6) the mechanization of library functions, including computer centers as part of the library, methods for reducing detailed clerical work in the library, and centralized processing centers; (7) the carrel as a library unit; (8) faculty cooperation in the selection of library media; (9) the image of librarianship; (10) the central library with decentralized functions and facilities; (11) library construction and planning; and (12) innovations in the library in specific relation to the college and university of the future.

FOOTNOTES

1. Francis H. Horn, "Forces Shaping the College of Arts and Sciences." Liberal Education, vol. 50, p. 5. March, 1964.
2. Marjorie Carpenter, "Building a Philosophy of Learning into a Library." ALA Bulletin, vol. 55, p. 174. February, 1961.
3. Robert H. Bonthius, The Independent Study Program in the United States, p. 3, 6. New York, Columbia University Press, 1957.
4. Robert Thayer Jordan, "The College Host Center and the Library-College," in Jordan, ed., "The College Talkshop," p. 1. Gambier, Ohio, Kenyon College, June 24-29, 1964.
5. North Dakota, Charter for the Library-College, p. 1. Jamestown, North Dakota, Workshop on the Library-College, December 19, 1965.
6. Herman H. Fussler, ed., "Library Buildings for Library Service," in Daniel Patrick Bergen, "University Library Organization as a Response to University Emphases." Library Quarterly, vol. 32, No. 1, p. 12. January, 1962.
7. Louis Shores, "The Undergraduate and His Library." University of Tennessee Library Lecture No. 11, p. 31. Knoxville, Tenn., University of Tennessee Library, April 15, 1959.
8. Douglas W. Bryant, "University Libraries and the Future." Library Association Record, vol. 68, No. 1, p. 6. January, 1966.

ANNOTATED BIBLIOGRAPHY

1. Abelson, Phillip H., "What Are Professors For?" Science, vol. 148, p. 1545. June 18, 1965.

The professor's principal function is more than lecturing; his most important role is to provide various forms of guidance. There is no evidence that television and programmed instruction are adequate substitutes for human contact. The present-day tendency is to delay the opportunity for meaningful interaction between professors and students until the student reaches the graduate level, which is a bad mistake.

2. American Library Association, Association of College and Research Libraries, Junior College Libraries Section, Selected Bibliography on Junior College Libraries, 1955-65, edited by Alice B. Griffith. Chicago, American Library Association, 1965.

The purpose of this bibliography is to assist librarians in establishing new junior college libraries and in improving resources, facilities, procedures, and services in existing junior colleges.

3. Astin, Alexander W., "Distribution of Students Among Higher Educational Institutions." Journal of Educational Psychology, vol. 55, p. 276-87. October, 1964.

Characteristics of entering freshmen classes identified in a previous study were found to be highly related to certain characteristics of the college. Aspirations of entering students appear to be suited to the curricular offering of the institution. Private nonsectarian institutions tend to recruit student bodies with greater potential for academic, scientific, artistic, and social achievement than do other types of institutions.

4. "Automation and the Library of Congress: Three Views." Library Quarterly, vol. 34, p. 229-39. July, 1964.

The three views concerning automation which are presented here typify the controversy currently raging over the topic. All three are reviewing and discussing a report entitled Automation and the Library of Congress while giving the pros and cons of the system. The chairman of the team which conducted the survey answers the criticisms and states that in time, technology and a growing awareness of its possibilities will give impetus to progress in the area of automation.

5. Bach, Harry, "Why Allocate?" Library Resources, vol. 8, p. 161-65. Spring, 1964.

It has been found that in a large majority of academic institutions, librarians still prefer materials to be selected by the faculty with the aid and advice of the library staff rather than vice versa. Tied in with this problem is the present method of allocating funds, which is found to have many disadvantages.

6. Bennett, M. (pseud.), "Unauthorized Report from the Committee on the Stereotyped Librarian." Library Journal, vol. 89, p. 2285-86. June 1, 1964.

An amusing, interesting report on the search for proof that "librarians cannot be stereotyped and that they are just like everyone else, sometimes even more so."

7. Bergen, Daniel Patrick, "Librarians and the Bi-polarization of the Academic Enterprise." College and Research Libraries, vol. 24, p. 467-80. November, 1963.

The author suggests that librarians be trained in new schools devoted exclusively to the training of academic librarians. Only in this way can faculty-library integration be achieved.

8. _____, and E. D. Duryea, eds., The Library and the College Climate of Learning. Syracuse, Syracuse University, School of Library Science and School of Education, 1966.

The book includes an address by Patricia B. Knapp, "Involving the Library in an Integrated Learning Environment." An excellent guide as to what is meant by a college climate, the book discusses in a most readable manner the library in an integrated learning environment.

9. Bixler, Ray, "Ostracize Them!" Saturday Review, vol. 49, p. 48. July 2, 1966.

Another group of offenders can be found in the classroom. In no other area of the applied behavioral sciences is our knowledge so scanty and our position so intransigent as in the technology of teaching. Some hide behind the contention that teaching is an art and point out that any effort to investigate the efficiency of what teachers are doing and how they are doing it will be an infringement upon academic freedom. Research is frequently ignored if evidence casts doubt upon the reliability of some established practice.

10. Bolman, Frederick, "Feast or Famine for the Liberal Arts College?" Educational Record, vol. 45, p. 67-73. Winter, 1964.

Courses and curriculums proliferate because of faculty control, which means that no one department can risk incurring the wrath of others. Reformed liberal arts colleges may be constructed from such principles as the economy of large classes, programmed learning, electronic lectures, independent study, faculty assistants, and inter-institutional cooperation. Curriculum and educational policy should be placed in the hands of a new agency, a faculty-elected council, with equal ad hoc administrative representation, employing an economic consultant.

11. Bradshaw, V., "Selling Ourselves." Assistant Librarian, vol. 56, p. 215-18. November, 1963.

We as librarians must assume the responsibility of our own "image." We must improve it and we can do so, but we can also do a great deal of damage to our collective reputation unless we make concerted efforts to "see ourselves as others see us."

12. Brahm, W. T., "Great Misconceptions?" Library Journal, vol. 90. p. 594 f. February 1, 1965.

As its responsibility the library profession has to be alert to potent forces at work in our nation which are capable of producing "turning points in history" before every one becomes aware of them.

13. Branscomb, Harvie, Teaching with Books. Chicago, American Library Association, 1940.

Textbook teaching is too uniform. The library should not originate the educational program. Scholarly qualities are more important in the librarian than technical proficiency. Auxilliary collections of core books and duplicates should be next to or in the instructor's offices

and classrooms. All humanities and social science classes should be held in the library. The use of books is central and primary. There should be a physical association between student, faculty adviser, and book collection.

14. Brown, Charles E., "Schools in Newton." Atlantic, vol. 214, p. 74-78. October, 1964.

The author discusses a school system, including a junior college, receptive to every variety of experimental and new curricula, including schools within schools at the high school level, consisting of groups of 100 students and five faculty each.

15. Brown, James W., ed., New Media in Higher Education. Washington, National Education Association, 1963.

Essentially a reference book, containing a hundred case histories on the use of every conceivable variety of "new media" in universities.

16. Brumbaugh, A. J., Report of the Planning Commission for a New University at Boca Raton. Tallahassee, Fla., Board of Control, 1961.

This is probably the most extensively studied and soundly based new experimental college now under construction. Actually not a university, it is a junior-senior college, integrated with the public junior colleges in Florida. The learning resources center will be highly automated, and will be the locale for most campus activity. The librarians will have a far more important role than in the past, functioning in teams with the faculty, with their principal role to know people, and to guide and counsel in the learning process. Instead of classes, there will be group study, seminars, and personal research projects.

17. Bundy, M. L., "Behind Central Processing." Library Journal, vol. 88, p. 3539-43. October 1, 1963.

The results of a series of studies conducted by Dr. Bundy for the Missouri State Library as part of a state survey are revealed here, providing an indication of current activity and suggesting what has been the impact of processing centers on public library operations.

18. Burdick, Charles, "The Library and the Academic Community." Library Resources, vol. 8, p. 157-60. Spring, 1964.

Today the library is "no longer an intellectual pleasure palace catering to man's sensual nature" but "a research center." Therefore, the

proper materials must be in them and must be readily found. Librarians must become more "nationalistic" by seizing control of acquisitions, cataloging departments, and becoming specialized people who cooperate at all times with faculty members.

19. "Campus '65." Newsweek, p. 43-63. March 22, 1965.

Based on hundreds of interviews at dozens of campuses, this national survey documents the values, problems, and activities of today's college students. Prominent among these is an interest in smaller-sized colleges and in greater involvement of faculty in teaching.

20. Carr, J. B., "Project Freedom." English Journal, vol. 53, p. 202-04. March, 1964.

Instigated by a classroom teacher, "Project Freedom" allowed high school English students to study independently for a period of six weeks, each student giving a written summary at the end of the course.

21. Cheydleur, Benjamin F., "Information Science and Liberal Education." American Documentation, vol. 16, p. 171-77. July, 1965.

Rapid progress is being made in developing man-interface conversations in "natural" English. Immediate availability throughout the world of all information files will engender continual review and evaluation in the scientific spirit that welcomes reexamination of any data without fear.

22. "Classless University: Colleges Add Programs For Independent Study to Avoid Academic Rush." Wall Street Journal, p. 1, 12. April 5, 1955.

At Lake Forest College in Illinois, 25 students are enrolled in a four-year program that has no grades or required courses and that tests only twice during the four years. At Colgate University a month of independent study in the middle of the academic year frees the student "from classrooms, schedules, grades, credits, and encourages him to take a more individual and resourceful approach to his work." Only a small, private college has the flexibility to innovate and to experiment.

23. Commager, Henry Steele, "The Problem Isn't Bricks...It's Brains." New York Times Magazine, p. 11. January 29, 1956.

The author claims that given "the right atmosphere, the appropriate facilities, and time, students will educate each other...manage their own journals, political and social activities and academic programs."

24. Cox, Eric, "The University and the Decaying American City." Educational Record, vol. 45, p. 395-400. Fall, 1964.

Cox suggests a variety of community services in which students and faculty can participate. One-half of the students at Trinity College participate in such work at least once a week.

25. Dale, Edgar, "The Teacher and Technology." Education Digest, vol. 29, p. 24-27. January, 1964.

The teacher must become an organizer and manager of learning experiences, working with individuals and small groups, and devoting more time for discussion and creative interaction rather than presenting subject matter, giving and correcting tests, and assigning lessons. Students should become responsible for their own learning.

26. Davis, James A., "Intellectual Climates in 135 American Colleges and Universities." Sociology of Education, vol. 37, p. 110-28. Winter, 1963.

High-quality, private, small institutions have high proportions of seniors endorsing intellectual values; technical schools are quite low in this respect.

27. DeArmond, Fred, "Books To Buy or To Borrow?" Library Journal, vol. 84, p. 2890-91. October 1, 1959.

Librarians and booksellers should not be in competition but should complement one another. "Public libraries will expand their services as they add to their board of trustees more makers and sellers of books."

28. Dickey, E. R., "Generalist Education for Systems Analysis and Design." Data Processing for Education, vol. 3, p. 2-7. August, 1964.

The student of modern management systems must rise above the prejudices of specialization. He must become a generalist, with ability ranging from the philosophic and creative to mastery of varied specific techniques, including computer programming.

29. Diehl, K. S., "Putting the House in Order." College and Research Libraries, vol. 25, p. 491-93. November, 1964.

The many problems associated with the purchasing, processing, and distribution of selected English, Bengali, Hindi, and Urdu books and periodicals to a small number of American libraries are discussed in detail.

30. Dober, Richard P., The New Campus in Britain: Ideas of Consequence for the United States. New York, Educational Facilities Laboratories, 1965.

The philosophy of the "continuous teaching environment" has dominated the planning of the eight new British universities. This is an attempt to develop "a physical form that preserves communication and contact between all parts of the institution, while allowing external accretion and internal change. Housing is brought in close to the academic arc, and facilities for leisure time pursuits are integrated with the academic buildings." Facilities and services, including the library, have been combined into one complex.

31. Downs, R. B., and R. F. Dlezell, "Professional Duties in University Libraries." College and Research Libraries, vol. 26, p. 30-39. January, 1965.

Clear demarcation of the respective duties of professional and non-professional staff members in university libraries is needed, not only if faculty status is to be attained by the former, but also in the interest of human economy. Detailed job specifications have been developed by the universities of Michigan, Illinois, and California with summaries of descriptive data being given in this article.

32. Dykes, Archie R., "Innovation in Higher Education." School and Society, vol. 94, p. 179-81. April 2, 1966.

In a heavily footnoted short article, Dykes lists reasons for the lack of innovation in higher education.

33. "Educational Research: Crisis for Publishers." Publishers Weekly, vol. 187, p. 45-49. January 11, 1965.

This article includes the ideas of Henry M. Brickell, assistant superintendent of the Manhasset, N.Y. public schools, on ideal education. He believes that in upgraded schools, the emphasis in learning materials should be on self-instruction. Materials should contain built-in devices providing prompt feedback on each student's level of achievement.

34. Ellsworth, R. E., "Another Chance for Centralized Cataloging." Library Journal, vol. 89, p. 3104-07. September 1, 1964.

Instead of action being taken on the idea of centralized cataloging, most librarians are merely talking about it. Some things have been done--the National Union Catalog, the Cataloging-in-Source project, John Cronin's Cards-with-Books program, some cooperative cataloging, and the P.L. 480 centralized cataloging project. Proposed here is a National Cataloging Center in Washington which will contract cataloging for books from countries using less common languages. This will help alleviate and avoid the cataloging crisis of the future.

35. _____, The School Library: Facilities for Independent Study in the Secondary School. New York, Educational Facilities Laboratories, 1963.

The author presents an expanded concept of the school library, based on direct access to a large quantity of varied materials.

36. Erskine, M. W., and H. A. Sanbar, "Selling Paperbacks Revitalizes Library." Library Journal, vol. 84, p. 1295-96. April 15, 1959.

Two librarians from Newton, Mass., give their experiences with a bookstore in the library. Because of their great success they "feel justified in saying that the bookstore has been a revitalizing force in [their] school."

37. Eurich, Alvin C., "The Commitment to Experiment and Innovate in College Teaching." Educational Record, vol. 45, p. 49-55. Winter, 1964.

College faculty members are more loathe to adopt new methods in teaching than almost any other group of society. Change in higher education is resisted because of various false assumptions. The goal of all education should be to learn without the teacher.

38. Ferrer, Terry, Our Colleges: The Crisis in Change. New York, Herald Tribune, 1965.

A reprint of a series of articles in the Herald Tribune, including a survey of experimentation in 18 colleges.

39. Ferry, W. H., Liberal Education: Reflections and Surmises. Santa Barbara, Calif., Center for the Study of Democratic Institutions, 1963.

Education should be a primary rather than a secondary aim of society, with the aim of self-improvement, understanding of actual political and economic realities, critical intelligence, and development of a receptive attitude to proposals for radical change. With increasing personal mobility, involvement in world affairs, exposure to ever more sophisticated commercial and political management, increasing length of life, and decreasing work week and number of work years, liberal studies assume increasing importance in contrast to vocational studies.

40. _____, "Why the College Is Failing." Educational Record, vol. 44, p. 312-20. October, 1963.

Activism has replaced thought in our colleges. What is needed is "collective action, for understanding the problems that we inescapably share in common" so that each generation can take "a responsible and self-governing role." The college has fostered self-centered utilitarianism when it should have been subjecting utilitarianism to concentrated criticism. It has unresistingly turned from a community into a corporation and has values based on the requirements of profit, public relations, and efficiency. Equally harmful is the wholesale adoption by the colleges of the doctrine of community needs. The college passes trained, but not educated, people into the world.

41. Freitag, Wolfgang M., "Planning for Student Interaction with the Library." California Librarian, vol. 26, p. 89-96. April, 1965.

The author discusses the development of the undergraduate library program at Stanford, and includes discussion of a proposed, but unapplied, reader's interest classification as well as development of a book catalog.

42. Fuller, R. Buckminster, Education Automation. Carbondale, Ill., Southern Illinois University Press, 1962.

In the next two decades, there will be transformations in the education process of the most astonishing and fundamental variety. As a consequence of comprehensively undertaken specialization we have today a general lack of comprehensive thinking.

43. Gardner, John W., "Education as a Way of Life." Science, vol. 148, p. 759-61. May 7, 1965.

Traditional arrangements for education must be supplemented by a system designed for lifelong learning. This can be done through credit by examination, television, correspondence study, self-teaching devices, libraries, and group study in various parts of the state, with the only requirements being certification of the instructor, provision of the syllabus, and examination for credit.

44. Gifford, Don C., Toward New Patterns: A Liberal Arts College. Williamstown, Mass., Williams College, 1960.

This book includes a profound and original discussion of specialization vs. general studies. It advocates the bookstore as an integral part of the library and criticizes the libraries of the leading New England colleges as being too huge to encourage interdisciplinary interests. Gifford advocates four "saturation-integration" phases in the college: initial survey of many fields; concentration on one field, but with truly deep and broad implications in other fields; study in related fields; and integrative study ranging through all the major disciplines. "The Library should be conceived and developed as the central and functioning symbol of the college's emphasis on independent and integrative studies."

45. Givens, Johnnie, "The Small and Medium Size College Library." Southeastern Librarian, vol. 7, p. 12-15. Spring, 1957.

The author suggests the development of teacher-librarians, to work with each class weekly, bi-weekly, or monthly in exploitation of library resources.

46. Goodman, Paul, The Community of Scholars. New York, Random House, 1962.

Faculty should withdraw from their colleges and universities and set up independent small colleges, free from "frills" or elaborate buildings. Tuition costs would not be half as high as they are now. Such schools should be established close to large public libraries or a university.

47. _____, "Saving the Liberal Arts." Commonweal, vol. 80, p. 359-61. June 12, 1964.

"If we are going to require as much schooling as we do, we must arrange for breaks and return points; otherwise the schooling inevitably becomes spirit-breaking regimentation."

48. Gore, Daniel, "Anachronistic Wizard: The College Reference Librarian." Library Journal, vol. 89, p. 1688-92. April 15, 1965.

Gore proposes instruction in library and bibliographic techniques by a "new breed of teacher-librarians."

49. Govan, James F., "This Is, Indeed, the Heart of the Matter." College and Research Libraries, vol. 23, p. 467-72. November, 1962.

This article advocates increased independent study to alleviate the crisis in enrollment and to increase the quality of college instruction. Wide reading should replace lecture time. The faculty's role would be enhanced as they would be freed from the role of presenting lectures and could devote their time to acting as guides and critics.

50. Gusfield, Joseph, and David Riesman, "Faculty Culture and Academic Careers: Some Sources of Innovation in Higher Education." Sociology of Education, vol. 37, p. 281-305. Summer, 1964.

A comparative study of the faculty of Monteith College and Oakland University, both founded in the same year as experimental schools introducing liberal education at an elite level to a commuting working-class student body.

51. Gwynn, Stanley E., "The Liberal Arts Function of the University Library." Library Quarterly, vol. 24, p. 311-21. October, 1954.

Love of books, the habit of reading, and library knowledge and skills comprise one of the liberal arts that should be developed by the library staff because of the abdication of this responsibility by the faculty. This staff should be more than conventional; it should be comprised of learned persons who would work sympathetically with students, especially those students who are eager to discuss books and to grow intellectually.

52. Hamilton, Thomas H., The Idea of a Library State University College. Geneseo, N.Y., 1961.

Hamilton explores the difference between bibliomania and librarianship. The high-level librarian must not be too different from the teacher and scholar; he should have a high level of non-specialist knowledge in all fields, plus depth in one field. The library should be a center of learning rather than a highly organized warehouse.

53. Hammer, Donald P., "Automated Operations in a University Library--A Summary." College and Research Libraries, vol. 26, p. 19-29, 44. January, 1965.

"Repetitive tasks in libraries, as in other industries, are subject to machine accomplishment. The value of an on-line system to library service will probably make it desirable for the university library to install its own small or medium-sized computer within its machine configuration." The activities of each functional area in a conventional library are surveyed as they could be accomplished in a machine-based system, and prospective improvements in service are noted, as well as likely developments of value to the library staff. Particular emphasis is devoted to the utilization of machines in the routines of technical services and in circulation control.

54. Hanes, Fred W., "Another View on Allocation." Library Resources, vol. 8, p. 408-12. Fall, 1964.

Hanes criticizes Harry Bach's article entitled "Why Allocate?" (see above), disagreeing with virtually every statement Bach makes.

55. Hardendorff, J. B., "Library Image: A New Perspective." Wilson Library Bulletin, vol. 36, p. 133. October, 1961.

Pictures by first-graders throwing fresh light on the much-discussed "library image."

56. Hart, Eugene D., and W. J. Griffith, "Professional or Clerical?" Library Journal, vol. 86, p. 2758-59. September 1, 1961.

Using the ALA's Descriptive List of Professional and Nonprofessional Duties in Libraries as a basic guide, the authors conducted a study to find the involvement of professional librarians in nonprofessional duties, to devise a method for determining these facts accurately and quickly, and to include a self-audit procedure that would be useful to practicing librarians. Results indicated that professional librarians were involved to a significant degree in the performance of nonprofessional duties, with the factors responsible for this situation also being given.

57. Hartnett, Rodney T., and Clifford T. Stewart, "Final Examination Grades of Independent Study Students Compared with Those of Students Taught by Traditional Methods." Journal of Educational Research, vol. 59, p. 356-57. April, 1966.

"Students taking college courses in the traditional fashion were paired with students of equal ability who took the same courses on an independent study program. Comparison of their performance on a common, objective, final examination was made in 6 courses having at least 15 pairs of matched ability students. The findings revealed significant differences favoring the independent study group in 2 of the 6 courses, with the other courses indicating no significant differences between the groups." The experiment was conducted in the College of Basic Studies at the University of South Florida.

58. Harvey, John F., "The Role of the Junior College Library in Classroom Instruction." Junior College Journal, vol. 32, p. 441-47. April, 1962.

Harvey includes a resume of Branscomb's "Teaching with Books" and B. Lamar Johnson's books.

59. Hatch, Winslow R., ed., Approach to Independent Study. New Dimensions in Higher Education, No. 13. Washington, U.S. Office of Education, 1965.

An excellent review of the subject, indicating a promising future for independent study and library-centered learning.

60. _____, "General Education and University Reform." Improving College and University Teaching, vol. 12, p. 134-50. Summer, 1964.

Basing his view on a UNESCO-sponsored study of Central American universities, the author urges a number of basic reforms, including "house plans, work-study programs, de-emphasis on grades and credits and technical-terminal programs." He advocates a spirit of inquiry rather than a community of pedants.

61. High Schools 1962. New York, Educational Facilities Laboratories, 1962.

A report on 11 new experimental high schools, including one of the first schools in the United States to make independent study of all kinds--and the library--the central feature of its design. Each student at the Blackwell, Oklahoma, high school has his own personal carrel in the combined library-resource center, teacher consultation area, and dining area.

62. Hirsch, Felix, E., "Use of the Book Collection in the Teaching Program of a Progressive College." College and Research Libraries, vol. 2, p. 48-54. December, 1940.

The article includes suggestions based on programs at Bard, Sarah Lawrence, and Bennington colleges. It reports an extraordinary interest in reading, encouraged by lack of preconceived curriculum and by the close personal relationships between faculty, librarians, and students.

63. Hope, N. W., "Some Thoughts on the Changing Image of Librarians." Journal of Educational Librarianship, vol. 3, p. 171-72. Winter, 1963.

The image of today's librarian is being remolded along many new fronts because librarians are found in such areas as science, industry, and even at the race track (providing information pertaining to the horses, breeding statistics, stud fees, etc.).

64. "How Colleges Combat Alienation and Improve Teaching: A Kappan Survey." Phi Delta Kappan, vol. 47, p. 410-14. April, 1966.

An account of a cross-country survey of what colleges are doing to solve the problems of "increasing distance between faculty-administration and students and the poor quality of collegiate instruction." It cites such cases as the University of California at Berkeley, Antioch, the University of Minnesota, Michigan State, and others.

65. Hughes, M. H., "Money Changers? A College Library Sells Paperbacks." Alabama Librarian, vol. 12, p. 34-35. April, 1961.

The librarian of Birmingham-Southern College explains the cooperative paperback selling project undertaken by a member of the faculty, the student government, and the circulation department of the library.

66. Hutchins, Robert M., "A Conversation on Education." Library Journal, vol. 88, p. 2821-28. August, 1963.

67. Hyman, Lawrence W., "Advancing Education by Eliminating Classes." Journal of Higher Education, vol. 32, p. 213-15. April, 1961.

Hyman proposes that the Fund for the Advancement of Education conduct an experiment in which a thousand or so students receive syllabi, textbooks, review books, and library cards, while an equal number of students attend classes. "Isn't it possible that on final

examinations...the students who worked at home would do as well as those who attended classes?" Faculty would prepare syllabi, study guides, and final examinations.

68. "Image of the Librarian as Shown on TV." Library Journal, vol. 88, p. 4450-51. November 16, 1963.

Depicted are three of the many images of librarians shown to the public on TV.

69. "Independent Study and the Academic Library." Journal of Higher Education, vol. 33, p. 44-47. January, 1962.

Support is being given to all phases of an independent study program, especially by librarians. The gap between library service available and library service required must be narrowed. This can be done only with substantial added support in resources and staff.

70. "Independent-Study Programs." Journal of Higher Education, vol. 33, G. R. Waggoner, ed., p. 393-94. October, 1962.

Independent study and honors programs are discussed here, primarily in terms of "the varying efforts in colleges and universities to ensure that gifted or superior students receive the kind of programs that will stimulate and demand the fullest exercise of their unusual powers."

71. "Individual Study Carrels." Architectural Record, vol. 134, p. 233-34. October, 1963.

Designs and brief descriptions of various study carrels are presented.

72. "Individualized Higher Education." School and Society, vol. 90, p. 367. November 3, 1962.

According to the 12 colleges in the Midwest College Council, college students are taking more responsibility than ever for their education and enjoying it. Rather than attending the traditional lectures, they are now digging out information and discussing it in seminars. Therefore, the libraries are busier than ever.

73. Jarrett, James L., "College Students--The New Breed." Saturday Review, vol. 48, p. 64-65, 75. March 20, 1965.

The recent upsurge in student power bodes well for student-oriented professors rather than research-oriented ones.

74. Johnson, B. Lamar, "Islands of Innovation." Junior College Journal, vol. 34, p. 9-14. February, 1964.

A report of innovations found on a 10,000-mile trip in the spring of 1963, in which the author visited 21 junior colleges and interviewed 30 other administrations.

75. _____, The Librarian and the Teacher in General Education. Chicago, American Library Association, 1948.

A detailed report of library-instructional activities at Stephens College. The emphasis is on the attitude of librarians, who take an interest, participate, and assist in the instructional process at every opportunity. The author advocates placing the classroom in the library.

76. _____, Vitalizing a College Library. Chicago, American Library Association, 1939.

Here Johnson advocates such measures as the librarian being the dean of instruction, classroom and dormitory libraries, faculty offices in the library, visits of librarians to classrooms, and conferences between librarians and faculty on the achievements and problems of students. He also suggests student participation in library administration.

77. Johnson, Henry C., "Are Our Universities Schools?" Harvard Educational Review, vol. 35, p. 165-77. Spring, 1965.

The author advocates the complete separation of research institutes from education. Research interests of the faculty would be devoted to methods for their becoming more effective teachers. The divisions of undergraduate curricula serve the interests of professionalism rather than the meaningful education of students. We should have federations of small colleges in healthy competition on the basis of educational effectiveness rather than size. Expensive facilities and special programs would be provided centrally.

78. Jolley, L., "The Function of the University Library." Journal of Documentation, vol. 18, No. 3, p. 133-42. September, 1962.

Only a scholar can succeed in serving and communicating with other scholars; thus the academic librarian must be a scholar. But

even more important, the librarian must stress service to scholars and students. "The real task of the librarian which is also one of the main tasks of the university is to train the student to train himself. To achieve this end the librarian has to introduce the student to the library... [this] is a continuous process which may well last the whole of the student's lifetime." One of the occupational hazards of librarians is "index learning" (quoting Pope), meaning a little knowledge of all subjects and facility with the whole network of bibliographical communication. "And yet index learning, if inadequate in itself, is the essential preliminary to a deeper study" and to learning to think for any scholar.

79. Jordan, Robert T., "The Educational Role of the College Library." A bibliography compiled by Robert T. Jordan. N.p., January, 1964.

An excellent annotated bibliography, including several areas of interest to those concerned with the experimental college movement. It does not include technical articles on librarianship nor in such areas as types of materials, automation, facilities, and articulation.

80. _____, "A High Quality College Library Is a Necessary Component of Academic Excellence." Printed by the author, 1962. Mimeographed.

The author shows the correlations between various library characteristics and academic excellence.

81. Josey, E. J., "Enhancing and Strengthening Faculty-Library Relationships." Journal of Negro Education, vol. 33, p. 191-96. Spring, 1964.

Three main topics are discussed in this paper in relation to the place each holds in the enhancement and strengthening of faculty-library relationships. They are the role of the administrator, the role of the library staff, and the role of the faculty. As to book selection, the author believes that the faculty has a definite responsibility by helping to keep the library resources in subject fields up to date and by filling gaps in the collections. Better faculty-library relationships must be built, and some suggestions are made as to how this should be accomplished.

82. _____, "The Role of the College Library Staff in Instruction in the Use of the Library." College and Research Libraries, vol. 23, p. 492-98. November, 1962.

In the education of college students both the faculty and the college library are necessary; therefore some concrete efforts must be made to instruct students in the use of library materials. There is a serious problem in colleges and universities of all sizes as to who is going to give library instruction. In summary, the author states that college libraries must be integrated more completely with the curriculum through a coordinated program of instruction in the use of the library.

83. Kamatos, T. C., and G. M. Jarvis, "Library Services and the Role of the New Librarian." Illinois Libraries, vol. 47, p. 301-05. April, 1965.

Equally important in the library-materials center program are plentiful materials, spacious physical facilities, properly trained staff, strong administrative backing, and the librarian's attitude and vision. Cooperation between the librarian and the whole professional staff is necessary in both the acquisition of suitable materials and their effective use. Because the librarian cannot be acquainted with every student, she should strive to give quality service to the teachers. Truly she holds a most challenging and important role in the future improvement of our schools.

84. Katz, Joseph and Nevitt Sanford, "Causes of the Student Revolution." Saturday Review, p. 64-66, 76-77. December 18, 1965.

The authors suggest "smaller units of instruction, establishment of more meaningful student communities, the relation of theory to social practice and experience, and the teaching of students by older students."

85. Kerr, Clark, The Uses of the University. Cambridge, Mass., Harvard University Press, 1963.

This work is highly relevant to any effort to define a viable size and organizational base for undergraduate higher education.

86. Knapp, Patricia B., "The Monteith Library Project, an Experiment in Library-College Relationship." College and Research Libraries, vol. 22, p. 256-63. July, 1961.

Monteith College emphasizes small discussion-type classes with major library projects. The library has furnished bibliographical assistance to the faculty and is organizing and controlling a complex network of communication systems.

87. _____, "Suggested Program of College Instruction in the Use of the Library." Library Quarterly, vol. 26, p. 224-31. July, 1956.

Faculty should present library instruction as an integral part of content courses. Students should understand the kinds of information available in various subject fields and the nature of the bibliographic apparatus. Library skill is one of the liberal arts. The author includes a program for persuading the faculty to adopt a program of continuity and integration of the library program.

88. Knox, W. T., "Changing Role of Libraries." ALA Bulletin, vol. 59, p. 720-25. September, 1965.

Knox describes his role as chairman of the Federal Government's Committee on Scientific and Technical Information (COSATI), and tells of its purpose, activities, and membership in relation to the improvement of scientific and technical information activities in the United States. To be studied by COSATI are such topics as the functions and relations of major components of the document-handling system; abstracting, indexing and alerting services; and the impact of advanced technologies on the information transfer network.

89. Krohn, Mildred L., "Study in Self-Reliance: The Shaker Heights Learning Experiment." Library Journal, vol. 90, p. 4520-22. October 15, 1965.

The author shows that "children can learn without the teacher being present, as they were given access to many materials, motivation and skill to look for their answers themselves--and then left on their own."

90. Kuhlman, A. F., "Can We Teach with Books?" Southeastern Librarian, vol. 7, p. 5-9. Spring, 1957.

A review of the history of interest in teaching with books, from Justin Winsor's "College Libraries as Aids to Instruction" to all of the Carnegie-sponsored activities in the 1920's and 1930's.

91. _____, "Library and College Education." Peabody Journal of Education, vol. 19, p. 196-208. January, 1942.

A plea for development of the library as the intellectual and cultural center of the campus, in which it could fulfill a role as a teaching

instrument in full cooperation with the faculty. Librarians as teaching colleagues of the faculty should be given leaves to study higher education trends.

92. Lacy, D. M., "Dissemination of Print: Paper Presented to the Symposium on Library Functions in the Changing Metropolis." Wilson Library Bulletin, vol. 38, p. 54-64. September, 1963.

The public library has as its duty the dissemination of materials to certain segments of our society which are not now literate; at the same time it must also serve the more highly literate segments of society.

93. Lafore, Laurence, "One Campus, Two Cultures." Science, vol. 145, p. 790-95. August 21, 1964.

An historian at Swarthmore predicts that specialization will increase, and that each specialty will become increasingly isolated.

94. Land, William G., "The Functional College Library: Organization to Implement the Instruction of Undergraduates." Journal of Higher Education, p. 90-94. February, 1947.

Two main types of librarians are needed: library technicians and library instructors. The latter should stimulate students into finding out the most efficient procedures for library inquiry.

95. Langer, Elinor, "Crisis at Berkeley." Science, vol. 148, p. 3667-68. April 9, 1965.

"A small but articulate segment from the FSM mingled its demands for political change with proposals for educational reform within the university and there emerged from the strike a shadow institution known as the Free University of California, which held classes and lectures after hours on subjects of special interest to the students."

96. "Liberal Education: Its Future in the University." Continuing Education for Adults, vol. 42. October 25, 1963.

A summary of the studies made in the past few years at the Institute of Higher Education at Teachers College. Conclusions: Sharp dichotomies between liberal and technical education are no longer tenable. There is need for incorporation of the aims of liberal education in the professional schools. There is often shocking influence of graduate school faculties in completely divorcing any liberal education from the

narrowly specialized education of scholars. In contrast, faculty in both the professions and liberal arts are agreed on the need for broad courses chosen at random or fitted to professional school programs.

97. "Library 21's Electronic Library Previewed in New York." Library Journal, vol. 87, p. 1567-68. April 15, 1962.

Among the "talents" of the UNIVAC computer the most notable were its use as an electronic gazetteer and its preparation of a personalized reading list. These may be two of its uses in the library of the future.

98. Lutnick, S. M., "Who Should Choose Books?" Library Journal, vol. 87, p. 1951-54. May 15, 1962.

According to the author, it is the classroom teacher who must have final authority in the recommending of specific titles to be purchased for the school library. The reasons he gives for such a suggestion are that there are a great many more teachers than librarians ("strength in numbers") and they have more influence with parents.

99. McGrath, Earl J., "The College Curriculum--An Academic Wasteland?" Liberal Education, vol. 49, p. 235-46. May, 1963.

Most undergraduate departments offer a greater diversity of instruction than that required either by a sound liberal education or by preparation for graduate study. This commonly results in a poorer rather than a better liberal education. No scholar or administrator suggested more than 50 semester hours in an undergraduate major, yet some students devote 80 percent of their time to their major field. Privately supported liberal arts colleges will eventually be eliminated.

100. Marland, S. P., "Winnetka's Learning Laboratory." Educational Leadership, vol. 20, p. 459 f. April, 1963.

Self-instruction, self-motivation, and independent inquiry are characteristics of education stressed in Skokie Junior High School in Winnetka. By placing the newer media of instruction in close partnership with the conventional library, children, with guidance and direction, will learn much more quickly than before.

101. Maxfield, David K., "Counselor Librarianship at U.I.C.!" College and Research Libraries, vol. 15, p. 161-66. April, 1954.

The student can expect a skilled librarian to be an effective teacher

and an efficient counselor, "so that he may more readily define his problems--educational, personal or bibliographical."

102. Meyers, Mary E., "What Is a Librarian?" Oklahoma Librarian, vol. 13, p. 75. July, 1963.

The author gives her impressions of the various librarians she has met. Finding them completely different from their widespread "image," she states that librarians are some of the best-informed and most attractive women in the community.

103. Millard, Richard M., "Ensuring the Future of the Liberal Arts." Educational Record, vol. 45, p. 371-78. Fall, 1964.

The author sees Earl McGrath joining Jacques Barzun in concern about the way the four-year liberal arts program is being squeezed between the upgrading of the high school and increasing professionalization of the upper years. Two dangerous trends are the creation of separate graduate and undergraduate colleges and the extension of public education through grade 14.

104. Moon, E., "Paperbacks: For Sale?" Library Journal, vol. 89, p. 2044. May 15, 1964.

A suggestion, repeatedly turned down by libraries and in particular public libraries, is that of selling paperbacks in the library. The author suggests that these librarians take a good look at the pros and cons and perhaps then they will react more favorably to the idea.

105. Moss, M., "A Library Honors Program." Wilson Library Bulletin, vol. 38, p. 298. November, 1963.

This article describes the initiation of a library honors program at the junior high school level. In the program the students not only read more widely but more worthwhile materials related to their English and civics courses. The students gained not only a realization of the availability of good literature but also the pleasure of time well spent.

106. Moulds, Henry, "Why Have Teachers?" Education Digest, vol. 28, p. 32-33. February, 1963.

The author suggests the elimination of all classroom teaching and the substitution of syllabi, texts, assignments, study questions, examinations, and consultation hours.

107. Mousolite, Peter S., "A Program for the Talented College Student." School and Society, vol. 94, p. 125-26. March 5, 1966.

Students should be enrolled for a year of college rather than for courses. A student would work on a project which interested him, with the assistance of one of a number of faculty members. A program would be devised in conference, with the course of study consisting of projects, reports, and papers to be worked out by the use of all the necessary resources of the college and civic community. The adviser would lead the student from one area of interest to another in such a way that he eventually would cover considerable ground in all the main fields of knowledge, but would always be following his own interests.

108. Munro, J. E., "Bookstore in Library." Ontario Library Review, vol. 47, p. 146. November, 1963.

In the Toronto Public Library, bookselling has proved to be satisfactory, successful, and quite logical.

109. Munthe, Wilhelm, "The College Library." American Librarianship From a European Angle, p. 96-114. Chicago, American Library Association, 1939.

This vigorous and perceptive analysis of American library practice is still stimulating. The author decries the business of assigned readings and reserve books, indicating that these do not represent any flowering of intellectual activity. He urges that students should purchase more of their own books and develop their own libraries, as in Europe, rather than be pampered in every need, and with the resulting wholesale duplication of books in the library. He believes that all of the intensive activity of American librarians to encourage reading is largely wasted; in fact, even those students who come from families with literary and cultural traditions experience a weakening in their desire for reading during their college years. Munthe suggests as an answer to this problem that the junior college be the final two years of general education, with the last two years of college being devoted entirely to graduate or professional studies, as in Europe.

110. National Society for the Study of Education, Changes and Experiments in Liberal-Arts Education. 31st Yearbook, Part 2. Bloomington, Ill., Public School Publishing Co., 1932.

It is disconcerting to realize that scarcely any of the educational

techniques that are in prevalent use today are not included among the "128 outstanding changes and experiments" described in detail in this book. Included is a discussion of a "library-college" (p. 112), Wittenberg College.

111. Nichols, Rogert C., "Effects of Various College Characteristics on Student Aptitude Test Scores." Journal of Educational Psychology, vol. 55, p. 45-54. February, 1964.

A sample of 356 National Merit finalists attending 91 colleges was used to assess the effects of colleges on student Graduate Record Examination performance. Precollege characteristics of the students were controlled by multiple partial correlation and by modifications of this technique. Colleges tended to influence the Verbal and Quantitative scores of the students in opposite directions. The effect of college on the student's major field of study was small relative to the variability attributable to differences between students which already existed before their entrance into college.

112. Orne, Jerrold, "An Experiment in Integrated Library Service." College and Research Libraries, vol. 16, p. 353-59. October, 1955.

A description of the use of specially trained librarians as bibliographic assistants at Maxwell Air Force Base. They spend most of their time in the classroom or with faculty and students in the role of bibliographic experts in various subject fields.

113. Overhage, Carl J., Intrex. Cambridge, Mass., M.I.T. Press, 1965.

The library of the future will play an active role in the educational process and will be the "most powerful teaching instrument ever conceived." The idea of "reading for a degree" is still alien to most U.S. colleges. Eventually, an evaluation of the student's success will be based on what he has selected and read, not on the structure of the course.

114. Oxhandler, Eugene K., "Bringing the 'Dons' Up to Date." Audio-visual Instruction, vol. 8, p. 566-69. October, 1963.

The Oxbridge Don system, based on individual counseling, highly individual and flexible programs, and independent study in a large library, should be adopted in place of the traditional American system of

mass or herd instruction. The use of the computer can make the Don system economically feasible in today's schools. The entire system will be coordinated by the audiovisual specialist. Such a system is the logical culmination of a trend that began with Dewey and Parker, continued with the job-centered curriculum of the City and Country School, the large classes and team teaching of the Little Red School House, the contract plan of the Dalton School and the Winnetka plan, the core curriculum, and the giant step of the Trump plan.

115. Park Forest College, Where Else Such Promise? Park Forest, Ill., 1962.

A promotional brochure for a proposed new college, based on the Ruml recommendations, with a student faculty ratio of 20:1, few classes, and a trimester system. Designed to be a full-fledged liberal arts college, it will be oriented almost entirely to the Chicago suburbs, with students living at home. The most revolutionary idea of the college is the proposal to base the library on microfiche, with each student using a portable hand viewer.

116. Perkins, Ralph, The Prospective Teacher's Knowledge of Library Fundamentals. New York, Scarecrow Press, 1965.

Responses by 4,170 college seniors to tests designed to measure familiarity with libraries are reviewed. Librarians seem to be the sole interpreters of the library. "Current methods are at an impasse." All students should be given meaningful training in library use by teachers.

117. Pickett, A. S., "Experiment in Book Selection: San Francisco State College Library." Library Journal, vol. 86, p. 890. March 1, 1961.

Several recommendations on book selection which were used at the San Francisco State College Library are offered here.

118. Pirie, J. W., "Junior College Library Processing." Library Trends, vol. 14, p. 166-73. October, 1965.

A review of the technical service activities characteristic of junior college libraries based on a survey conducted in 1962-63 is presented here. The results are many and varied because of the variety in sizes and scope of the colleges.

119. Pressey, Sidney L., "Programming--Boom then Bust?" Education Digest, vol. 29, p. 9-12. April 1, 1964.

The inventor of programmed learning and the first "teaching machine" challenges the direction of the use of this technique in the last 10 years. He thinks that it is monstrous to use this technique as the main channel of instruction, rather than as an adjunct. Human beings do not respond to reinforcement and fragmented bits of information in the same way as animals.

120. "Push-button Carrels for the World's Fair." American Schools and Universities, vol. 36, p. 34-35. April, 1964.

This article describes the learning carrel which was exhibited at the World's Fair--how it operates, who contributed to its use, and its various benefits.

121. Saltus, Elinor C., "Teacher or Librarian?" Library Journal, vol. 87, p. 4588-89. December 15, 1962.

The author suggests that prospective librarians, rather than wasting time taking specialized methods courses and practice teaching, should be given carefully chosen education courses. Librarians should be prepared in fields where they can make their own special contributions to the schools from broad academic backgrounds that few teachers will be able to acquire.

122. Scherer, Henry Howard, Faculty-Librarian Relationships in Selected Liberal Arts Colleges: Doctoral Dissertation. Los Angeles, University of Southern California School of Education, 1960.

Scherer attempts to investigate the relationship between the instructor and the library. A survey was made of hundreds of faculty members and librarians relating to techniques and practices. The degree and incidence of their satisfaction is summarized. The dissertation offers no orientation toward a realistic integration of the faculty and librarian.

123. Schiller, A. R., "Reference Service: Instruction or Information." Library Quarterly, vol. 35, p. 52-60. January, 1965.

Two approaches to reference service are discussed here: one, that of instructing a person in finding his answer, and the other in providing him with information. Because of the antagonism between these two

approaches, the librarian's role is being confused and many potential users are being neglected; the idea of the library as an information center is being diminished. Miss Schiller favors the informational role of the library reference service, stating that instruction is important but is not a reference function.

124. Sheehan, Robert, "New Report Card on the Business Schools." Fortune, vol. 70, p. 148-50. December, 1964.

The trend in undergraduate business instruction is away from narrow specialization or professionalism. Instead, there is increasing emphasis on a broad liberal education and concepts in intellectually demanding courses.

125. Shera, Jesse, "Better Class of Mouse." Wilson Library Bulletin, vol. 39, p. 677. April, 1965.

For the past century the United States librarian has been losing prestige both in the popular mind and in the minds of librarians. The author hopes that serious attention would be given to a study of the deterioration of the library image; thus it might be improved.

126. _____, "The Library as an Agency of Social Communication." Journal of Documentation, vol. 21, p. 241-43. December, 1965.

Only rarely have librarians thought of their libraries as social agencies, the author believes. He then asks these questions. What happens to the workings of an individual mind when he confronts a library store or bibliographic tools? How does the knowledge assimilated by the individual become a part of the collective intelligence of a culture? How is social behavior influenced by the knowledge that society absorbs? These are the basic problems that confront librarians and that should guide their professional practice. Librarians must enlist the help of specialists in many disciplines in answering these questions.

127. _____, "Of Librarians and Other Aborigines." Wilson Library Bulletin, vol. 38, p. 781. May, 1964.

Librarians as a professional group are being threatened by the alien group of documentalists, information specialists, and information scientists. The only way to deal with this group is to absorb them into the library field.

128. Shores, Louis, "Just Suppose...." School Libraries, vol. 14, p. 23-25. October, 1964.

The author proposes an elementary school with only libraries and librarians.

129. _____, "The Library Arts College, A Possibility in 1954?" School and Society, vol. 41, p. 110-14. January 26, 1935.

This article contains important quotations from 50 to 100 years ago advocating the library-college. The author makes a distinction between the research library and the "educational library," and he advocates regular reading in the library, instruction by upper-level students, and reading programs instead of courses.

130. _____, "The Undergraduate and His Library." University of Tennessee Library Lectures Nos. 10, 11, 12. University of Tennessee Press, 1961.

131. _____, Robert Jordan, and John Harvey. The Library College. Drexel Library School Series, No. 16. Philadelphia, Drexel Press, 1966.

This report of a conference held at Jamestown College in 1965 explores independent learning and thinking and presents practical suggestions for implementing a library-college at Jamestown.

132. Singer, Len, "Florida Atlantic University." Audiovisual Instruction, vol. 8, p. 236-42. April, 1963.

The systems approach is used to design equipment facilities and the academic program in order to achieve the maximum educational experience. The library will be closely integrated into the instructional program as an integral part of a complex of "learning resources" activities, which include TV and radio, learning laboratories, graphics, and engineering.

133. Skinner, B. F., "Why Teachers Fail." Saturday Review, vol. 48, p. 80-81, 98-102. October 16, 1965.

There is no true technology of teaching. "College teaching has not been taught at all. It may be true that the teacher cannot teach but can only help the student learn...the belief that personal experience in the classroom is the primary source of pedagogical wisdom" is in error. It is actually very difficult for teachers to profit from

experience. Teaching may be defined as an arrangement of contingencies of reinforcement under which behavior changes.

134. Smith, Robert E., "A Review of Published and Unpublished Material Concerning College and University Learning Resource Centers." Champaign, Ill., Richardson, Severns, Scheeler & Associates, 1965.

This review includes an annotated bibliography, arranged by format and issuing agency. Unpublished material includes a concept for an "automated library" by Bruce H. McCormick. The best material is a tentative proposal from F. J. Koenig, for a combined library, faculty office building, and undergraduate learning center, which would eventually include computer-controlled programmed learning and the full panoply of audiovisual and Video resources. "The need is for new environments for learning, to make possible new approaches, to teaching, to scientific innovation, to exploration of independent study, and to systematic evaluation of new learning methods...plus a faculty-student carrel which is original with us...a semi-enclosed room with an opening instead of a door, furnished with a table for five."

135. Snape, W. H., "The House of the Book--Or the Teaching Library." Library World, vol. 65, p. 213-16. December, 1963.

This is a British proposal for "teaching-libraries," a term with which we are unfamiliar. Such a library would employ permanent senior and junior teaching staff in addition to calling upon "consultants" from other areas to assist. Staff members would be taught through actual practice and would also be given an opportunity for research.

136. Stern, George G., "Student Ecology and the College Environment." Journal of Medical Education, vol. 40, p. 132-54. March, 1965.

This article is a review of the Activities Index and College Characteristics Index, including charts exhibiting variations at various types of colleges. Characteristics of the elite liberal arts colleges are described. A college can succeed in implementing an educational philosophy which does not require a particularly generous endowment in either financial or intellectual resources, the author feels. The most effective schools offer places for students to withdraw in privacy, and opportunities to utilize solitude constructively. Conversely, there is also uncomplicated access to the faculty, provided there are places at which students and faculty may interact informally.

137. Stickler, W. Hugh, ed., Experimental Colleges. Tallahassee, Florida State University, 1964.

A report on programs at nine existing and two proposed experimental colleges, including the proposed library-centered college at Florida State University.

138. Stone, C. Walter, A Library Program for Columbia. Pittsburgh, 1965.

A proposal for an advanced library-communications system for Columbia City, a planned city of 150,000 people halfway between Washington and Baltimore.

139. Stretch, Bonnie Barrett, "Classroom Learning Is Not Enough." Saturday Review, p. 62-63. June 15, 1965.

A report on the recent proliferation of a variety of extracurricular "domestic peace corps" activities by college students.

140. "Study Carrels: A Bright, New Idea in Modern Library Facilities." Grade Teacher, vol. 83, p. 72-75. November, 1965.

Pictures and brief descriptions show how tables of various shapes may be converted into individual study carrels.

141. "Study Carrels: Independent Study Centers for Students and Teachers." Catholic School Journal, vol. 63, p. 86-87. September, 1963.

An experiment in individual biology carrels is described, and reactions from both teachers and students are recorded. Also some reasons are given for developing individual study centers, and a few designs are shown.

142. Sutton, H. Lee, "Is the Library the Heart of the College?" Saturday Review, vol. 45, p. 62-63. April 21, 1962.

The author suggests that a consciousness, particularly among administrators, of the shockingly low proportion of students who make use of the library, is needed. This consciousness, coupled with the carefully planned use of books and other materials, would help develop the library as the real heart of the college.

143. Tauber, M. F., "Faculty and the Development of Library Collections." Journal of Higher Education, vol. 32, p. 454-58. November, 1961.

An evaluative self-study was made at Columbia showing the weaknesses of the library collections in specific fields of instruction and research. In this study it was noted that there must be a cooperative effort between faculty and library staff to obtain proper materials for each field.

144. Tidwell, Roy, "The Oregon Plan." Library Journal, vol. 90, p. 3686-89. September 15, 1965.

"Flexible scheduling, time for study in school, excellent physical facilities, adequate staffing, and strong collections all help shift the responsibility for learning from the teacher to the student." The author follows many of J. Lloyd Trump's recommendations but with important modifications, such as a strong central library. This program is in effect at Marshall High School in Portland, Ore., which has about 35,000 volumes in its collection.

145. Tirrell, John E., "(Total!!) Independent Study at Oakland." Junior College Journal, vol. 36, p. 21-23. April, 1966.

Instructional methods, systems management, and procedures and development commitments of Oakland Community College are presented. Instructional methods which are self-directed and student-oriented, include use of audiotapes, visual displays, book, periodicals, laboratory experimental set-ups, programmed materials, and manuals.

146. Trump, J. Lloyd, Focus on Change--Guide to Better Schools. Chicago, Rand McNally, 1961.

Neither the classroom, the study hall, nor the library is adequate for independent study. The author recommends decentralized study centers in each major subject area, with carrels and audiovisual and electronic facilities under the supervision of a semi-professional. Teachers should work in teams, and librarians should be part-time members of these teams. The central library should consist only of less frequently used materials.

147. Tyler, Ralph W., "We Need the Experimental College." Education Digest, vol. 29, p. 40-42. December, 1963.

Experimental colleges are needed for the diverse types of students, to develop a curriculum which is in close correspondence to the present-day world, and to increase the effectiveness of learning.

148. U.S. Office of Education, *New Dimensions in Higher Education*.

This entire series would be very useful for anyone studying the impact of libraries on educational programs. Individual pamphlets deal with the importance of independent study, the effectiveness of teaching, and experimental colleges.

149. Vallance, Theodore R., "The Guiding Assumptions of the Liberal Arts Programming." Journal of Higher Education, vol. 34, p. 181-90. April, 1963.

An excellent discussion of the acceleration of vocational training for students in their freshman year. In their later years of college, there should be a liberalization of their required courses.

150. Veatch, Jeannette, "Clarify Teacher-Librarian Roles." Library Journal, vol. 86, p. 2995-97. September 15, 1961.

Job responsibilities of teachers and librarians in elementary schools must be clarified so that the best use will be made of everyone's talents. The librarian should not be an instructor but should work closely with classroom teachers in all phases of library work. "Book-reading, book-loving children" can be produced by effective classroom teachers and librarians.

151. Wilson, Edmund, "Thoughts on Being Bibliographed." Classics and Commercials. New York, Farrar, Straus, 1950.

Meat for the bibliographer: "I visited Princeton last spring, and one evening at the house of a professor, I uneasily became aware that this all-absorbing scholarship was after me. I had already been slightly troubled by the efforts of the Princeton Librarian to collect the letters of Mencken and by his project of bringing out a volume of them while the writer was still alive. I still thought of Mencken as a contemporary, whose faculties showed no signs of failing; I still looked forward to reading what he should write. That the librarian should have been able to induce him to accept this semi-posthumous status seemed to me an ominous sign that the movement was folding back on itself before having finished its work. And now they were creeping up on me, who was fifteen years younger than Mencken and had not yet really begun to write. I had even a chilling impression that the forces of bibliography would prefer me already to be dead, since the record could then be completed."

152. Wimberly, E. Brown, and O. Burton Adams, "A Design for Independent Study." Junior College Journal, vol. 36, p. 29-31. May, 1966.

"An experimental program at Columbus College in Georgia supports the value of independent study in junior colleges." The authors give the history, the methods of selecting students, the objectives, student evaluation, and conclusions about the experimental program at Columbus.

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REACTIONS

In order for this second series of "New Dimensions in Higher Education" to better serve the needs of colleges and universities throughout the nation, reader reaction is herewith being sought. In this instance, with respect to Impact of the Academic Library on the Educational Program, the following questions are asked:

1. Can you suggest other research, the results of which would add significantly to this report?
2. What problems related to this subject should be given the highest priority, in terms of further research? What steps, if any, has your library taken to incorporate the new technologies into its regular operations?
3. What has your institution done, or what does it propose to do, to develop closer and more useful faculty and student relationships with their libraries?
4. What can the United States Office of Education do to help colleges and universities utilize their libraries to their best advantage?

Kindly address reactions to:

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